Epidemiology poster session 2: Population: Migrants

P1-S2.73 EXPLORING THE RELATIONSHIP BETWEEN RURAL-TO-URBAN CIRCULAR MIGRATION AND HIV: A QUALITATIVE STUDY OF MIGRANTS AND PERSONS LIVING WITH HIV IN NORTH INDIA

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Background Migrant workers may be at increased risk of acquiring HIV and have been described as a potential bridge between high- and low-prevalence geographic areas and groups. The National AIDS Control Organisation of India has prioritised interventions for migrant workers with the aim of curbing the spread of HIV from high to low prevalence parts of the country. We describe links between migration and HIV and explore variations in risk between migrants.
Methods A qualitative study in Allahabad district, Uttar Pradesh, India. Interviews, focus groups and observations were carried out in two rural villages with high temporary out-migration of men, and in an HIV treatment centre in Allahabad. For this study we defined migrants as those who leave and return to their place of origin once or more in a year. Participants included key informants (14), rural migrant men (20), and men and women living with HIV/AIDS (PLHAs) (30).
Results PLHA and migrant men described a range of ways in which migration could lead to an increase in the potential or actual risk of acquiring HIV. These included separation from wives and opportunities for other relationships, exposure to sexual abuse in destination workplaces, sex between men, and exposure to unregulated injections. These risks varied according to destination, with less opportunity for sexual risk-taking in factories where men were housed in closely-supervised factory accommodation. HIV in turn affected migration with a particular impact on the ability to make money and care for families. For some men illness or the fear of becoming unwell limited further migration, and thus reduced income; others increased migrant labour in order to plan for an uncertain future for their dependents. An HIV diagnosis meant some lucrative international destinations became inaccessible, so they moved elsewhere for work.
Conclusions Labour migration can increase vulnerability to infection for migrants and their families. However, this relationship appears to be more complex than is often assumed. Unprotected heterosexual intercourse may not be the only way in which migration increases HIV risk as there are numerous other risky encounters that migrant workers may have due to their circumstances. Planned programmes to increase HIV awareness and promote condom use at destination and source locations have to be combined with a systematic examination of the effect of social and sexual networks and power relationships in the labour market.

P1-S2.74 HOW PATTERNS OF MIGRATION MAY INFLUENCE HETEROSEXUAL HIV TRANSMISSION

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Background Ethnic minorities originating from countries with high HIV prevalence account for a large number of heterosexually acquired HIV infections in Western European countries. These groups may be infected before migrating and they may engage in unsafe sexual practices both in the country of residence and in their country of origin. We investigate how patterns of migration may affect the heterosexual HIV epidemic in the Netherlands.
Methods A mathematical model was used that describes the transmission of HIV infection in heterosexual partnerships between African migrants, Caribbean migrants, and the local Dutch population. Acquiring HIV infection before migrating to the Netherlands or during trips to the country of origin was also accounted for in the model.
Results The estimated HIV incidence among adult heterosexuals in 2010 was 1.50 new infections per 100 000 individuals per year. If the number of migrants entering the country increases, then the incidence of HIV will increase, although the change among the local Dutch will be negligible. Moreover, if HIV prevalence among those migrating to the Netherlands (at the time of entry to the country) is higher, then the incidence in the respective ethnic groups will increase; among the other ethnic groups, the increase will be very small.
Conclusions Changes in patterns of migration can have a considerable impact on HIV transmission within ethnic minority communities in the Netherlands, but they hardly have any impact on transmission in the local population. Therefore, limiting migration and introducing travel restrictions would likely have no effect on HIV incidence in countries with low HIV prevalence among heterosexuals. Policy making should focus on targeted interventions, to reduce the burden of HIV disease in migrant communities.

P1-S2.75 ARE SEX/DRUG RISK BEHAVIOURS IN SENDING COUNTRIES PREDICTIVE OF SEX/DRUG RISK BEHAVIOURS IN RECEIVING COUNTRIES? THE CASE OF LATINO MIGRANT MEN IN NEW ORLEANS

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Background Migration and mobility have been associated with higher drug and sex risk behaviour. Whether this increased risk is a result of the characteristics of mobile persons or environmental influences in a receiving community has not been well elucidated. The purpose of this analysis was to determine if risk behaviour was a continuation of sending country practices or if it was adopted in the new receiving environment (ie, New Orleans).
Methods A cohort of Latino migrant men (n=93) were interviewed at baseline, 3 and 6-month visits and asked about past month behaviour. At a subsequent visit, they were also asked about behaviours in their sending country. All interviews were conducted in Spanish by trained staff. Four behaviours were examined: patronage of a female sex worker (FSW), sex with a man (MSM), binge drinking, and crack cocaine use. Cross-tabulations and McNemar tests were performed.
Results At baseline, the men were mostly Honduran (71.0%), migrated directly to New Orleans from their country of origin (62.0%), were single (50.5%) with a median age of 28 (range 18–50) and a median of 6 years of schooling. The percentage of men reporting patronage of FSW, MSM and crack cocaine use was significantly higher in New Orleans than in the sending country, and high proportion of those reporting the behaviours in New Orleans, did not practice these behaviours in the sending country. When comparing sending country to New Orleans behaviour in order to examine discrepancies for behaviours, all but binge drinking were significantly different ($p<0.04$) with adoption of the behaviour in New Orleans accounting for >85% of the discrepancy see Abstract P1-S2.75 Table 1.

Conclusion Rates of these four risky behaviours were high and, with the exception of binge drinking, were largely behaviours adopted in the USA Newly arrived migrant men are a group at high risk for sex and drug related STI/HIV. Interventions to prevent transmission in this vulnerable, difficult-to-access and highly mobile population are greatly needed.

Abstract P1-S2.75 Table 1 Behaviours in sending country and in New Orleans (N=93)

Behaviours	Patronage of FSW	MSM	Binge*	Crack cocaine
Reported in sending country	16/93 (17.2%)	3/93 (3.2%)	39/91 (42.9%)	2/93 (2.2%)
Reported in New Orleans	60/93 (64.5%)	10/93 (10.8%)	35/91 (38.5%)	12/93 (12.9%)
Not reported in sending country (of those reported in New Orleans)	50/60 (83.3%)	8/10 (80.0%)	15/35 (42.9%)	12/12 (100.0%)

*2 men had missing information.

P1-S2.76 SEXUAL CONCURRENCY AMONG LATINO MIGRANT MEN IN NEW ORLEANS

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Background Sexual concurrency and migration have both been implicated in the spread of HIV/STI. Migrant men are highly mobile, but their level of sexual concurrency has not been well studied. The purpose of this study was to examine the prevalence of and factors associated with sexual concurrency and to examine condom use within concurrent relationships among a group of newly arrived Latino migrant men (LMM) in New Orleans.
Methods LMM enrolled in an ongoing cohort study, who had at least one female sexual partner during follow-up were interviewed a three time points over 6 months. Concurrency was calculated by asking start and stop date of each sexual relationship as well as intention to continue. Partnerships that had overlapping dates were considered concurrent. The association between selected individual and environmental factors and sexual concurrency was examined using generalised estimated equations (GEE).
Results At baseline, LMM (n=90) were mostly Honduran (77.9%), employed (80.0%), worked in construction (55.6%), were uncircumcised (88.9%), were living with family (51.1%) and did not have a main sex partner (74.4%). Their mean age was 35.4 (SD 10.6) and they had been in New Orleans for average of 4.70 years (SD 0.89). During follow-up, 30 (33.3%) had at least one concurrent relationships, 10 (11.1%) had only concurrent relationships, and 59 (65.6%) had no concurrent relationships. In 239 observations, sexual partnering and consistent condom use was: concurrent (18.0%/53.5%), multiple but non-concurrent partners (5.9%/78.6%), and monogamous (50.6%/30.8%), while 25.5% were abstinent. Factors associated with sexual concurrency included: younger age, drug use, and living in crowed housing while belonging to organizations or sport team was protective. Of these 43 concurrent events, 21.0% included a risky partner (ie, female sex worker or casual partner) and main partner and 65.2% had at least one non-Latina partner. Of the 29 concurrent relationships that included a FSW, 5 (17.2%) did not use a condom with the sex worker.
Conclusion This sample of LMM exhibited high rates of concurrency with a potential for bridging. Drug prevention and interventions that promote social connectedness are needed to reduce concurrency among this mobile group.

Epidemiology poster session 3: Burden of disease

P1-S3.01 TRENDS IN THE INCIDENCE OF HOSPITALISATION FOR CHLAMYDIA-RELATED SEQUELAE AMONG WOMEN

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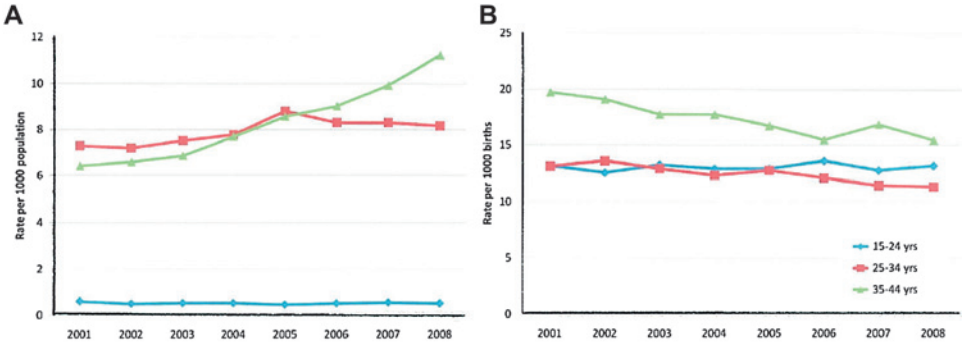
Background Chlamydia infection is thought to increase the risk of infertility and ectopic pregnancy. Over the last 10 years in Australia, chlamydia testing and notifications have increased dramatically, particularly in young women. As it is unclear how much increasing notifications reflect a true increase in chlamydia incidence, we sought to investigate rates of hospitalisation for the chlamydia-related sequelae, infertility and ectopic pregnancy in New South Wales (NSW), Australia's largest state with a population of 7 million.
Methods Routine data on hospitalisations for infertility and ectopic pregnancy, perinatal data, and population census data from 2001 to 2008 were used to estimate annual age-specific hospitalisation rates for infertility and ectopic pregnancy in women aged 15 to 44 years for the entire state of New South Wales. Hospital separations occuring within each year belonging to the same woman were linked using probabilistic linkage of identifiers so that multiple admissions by one woman were only counted once.
Results From 2001 to 2008 the number of women hospitalised for infertility increased from 7050 to 9978. The greatest increase was seen in women aged 35 to 44 years, from 6.4 [95% CI 6.2 to 6.6] to 11.2 [10.9 to 11.5] per 1000 population (p trend<0.001). There was no significant change among women aged 15 to 24 years (ptrend=0.3); see Abstract P1-S3.01 figure 1A. For women with



Abstract P1-S3.01 Figure 1 Women hospitalised for A) infertility and B) ectopic pregnancy in NSW, 2001 to 2008.